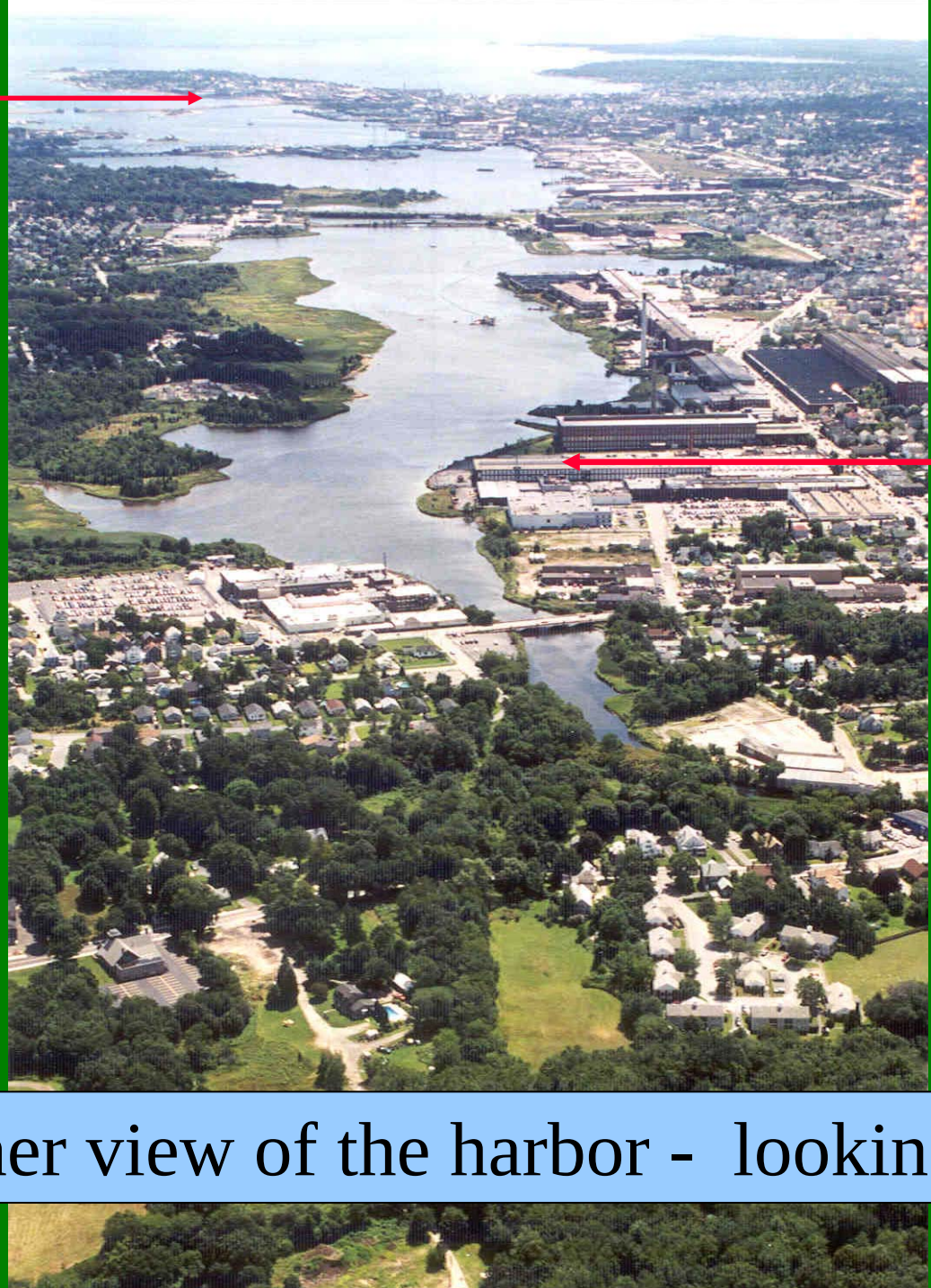
The New Bedford Harbor Superfund Site Cleanup

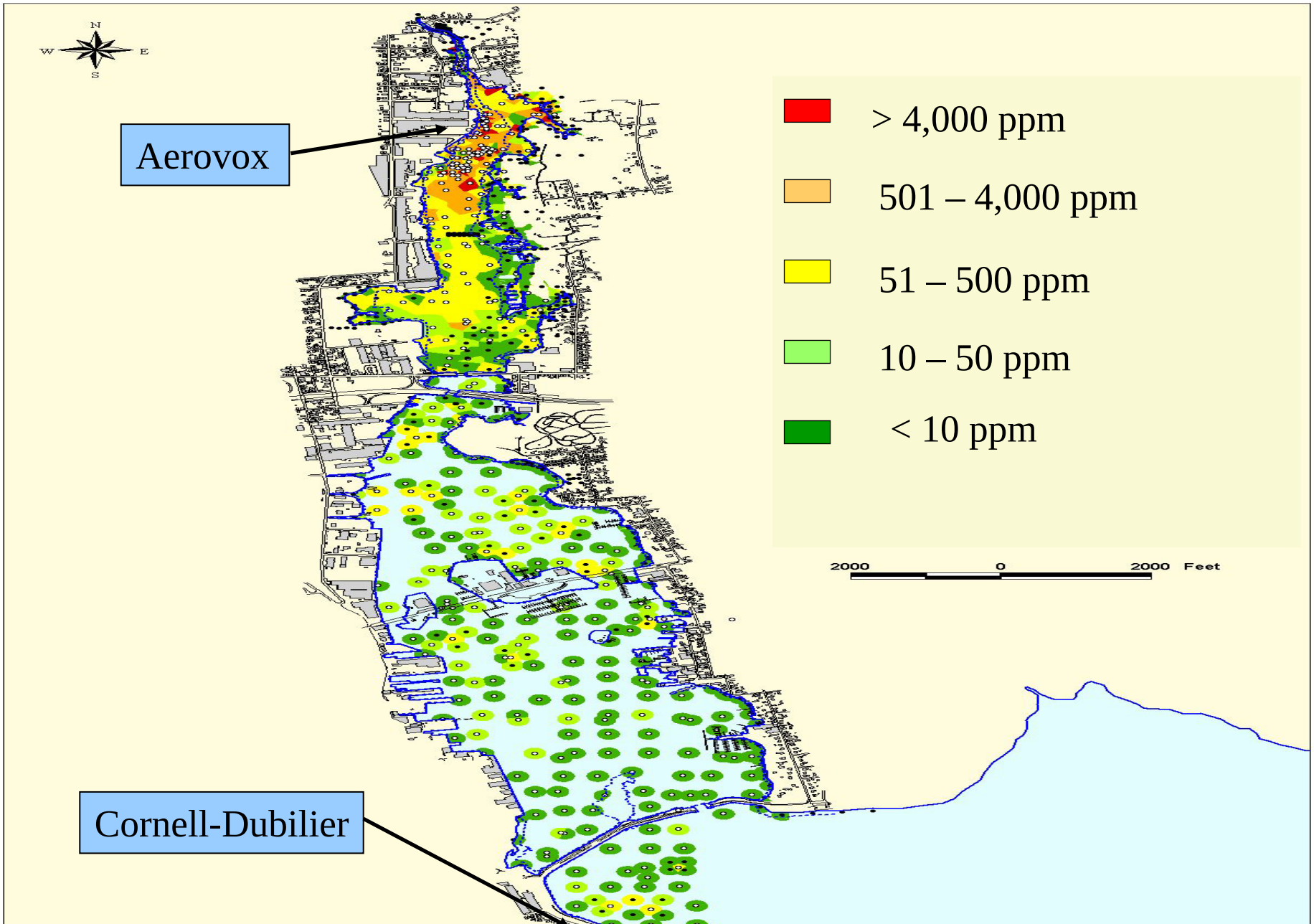
The Cornell-Dubilier plant

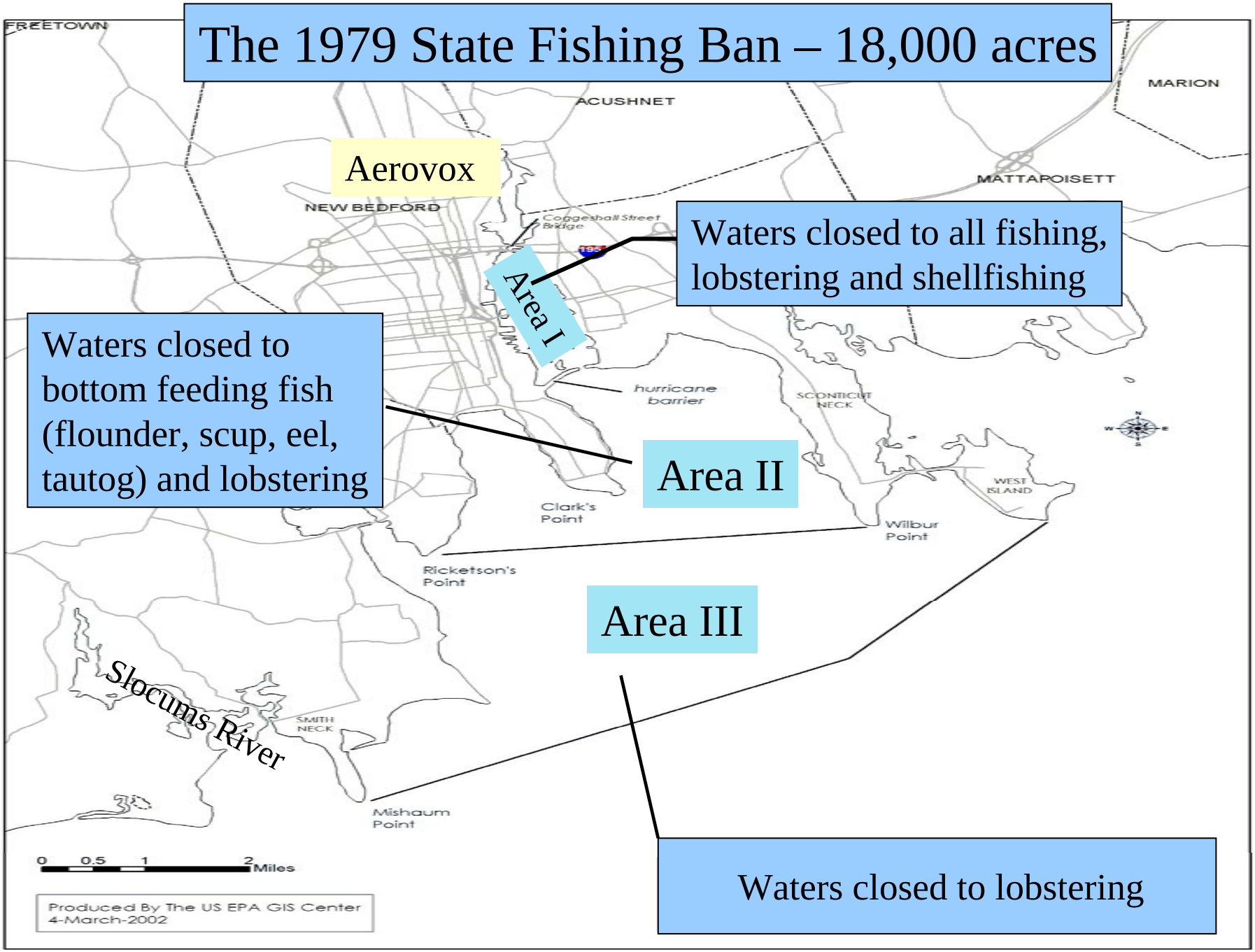


the abandoned Aerovox plant

Another view of the harbor - looking south

PCBs in sediment – top foot



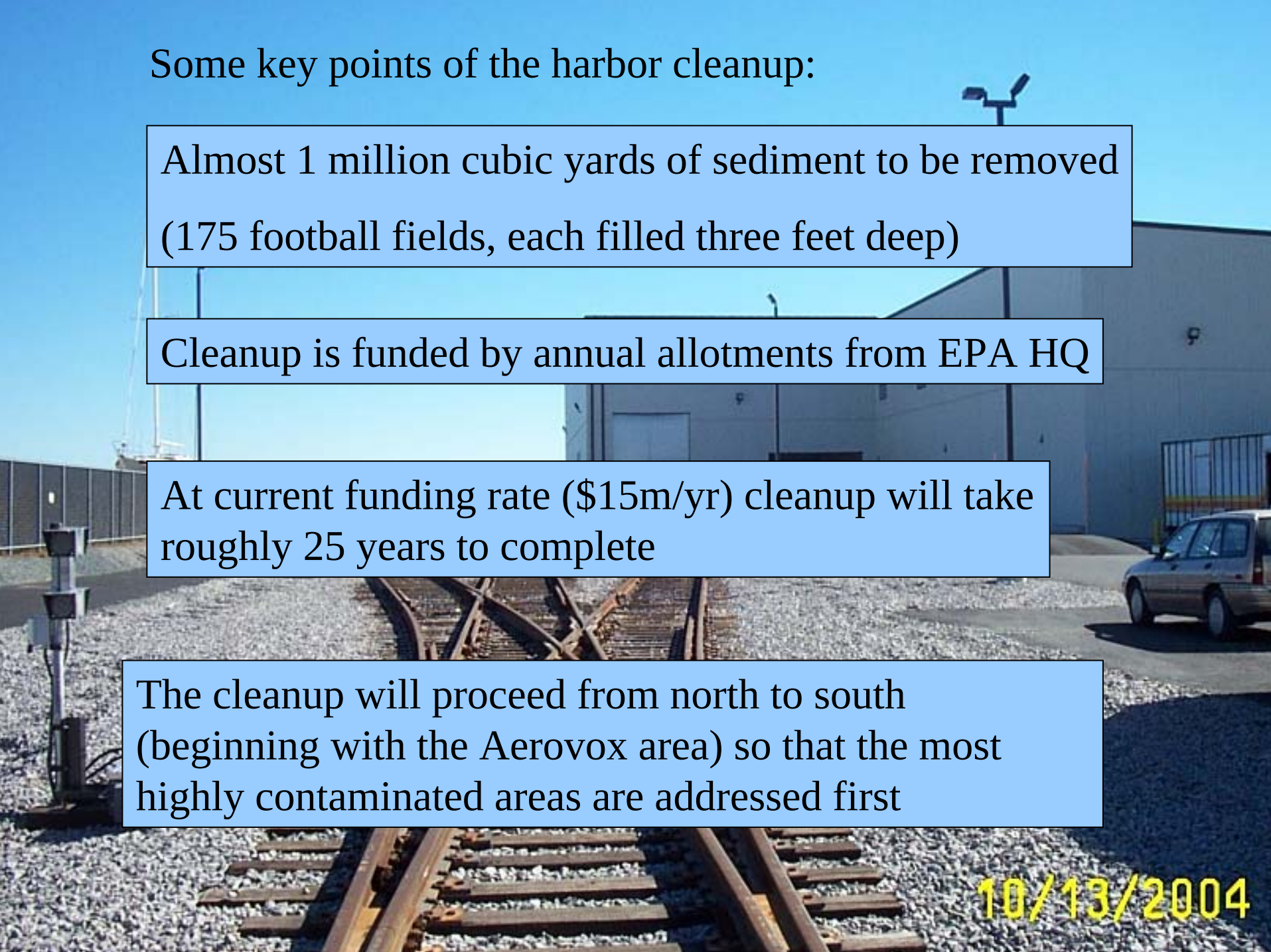

The 1979 State Fishing Ban – 18,000 acres
Aerovox
Waters closed to all fishing, lobstering and shellfishing
Area I
Waters closed to bottom feeding fish (flounder, scup, eel, tautog) and lobstering
Area II
Area III
Waters closed to lobstering
FREETOWN
ACUSHNET
MARION
MATTAPOISETT
NEW BEDFORD
Coggeshall Street Bridge
hurricane barrier
SCONTICUT NECK
WEST ISLAND
Clark's Point
Wilbur Point
Ricketson's Point
Slocums River
SMITH NECK
Mishaum Point
0 0.5 1 2 Miles
Produced By The US EPA GIS Center
4-March-2002

2002-03: cleanup and restoration of the Acushnet River north of Wood Street

Flow restored and saltmarsh planted (low tide)

Full scale dredging started in 2004

The main steps of the full scale cleanup process:



Some key points of the harbor cleanup:

Almost 1 million cubic yards of sediment to be removed

(175 football fields, each filled three feet deep)

Cleanup is funded by annual allotments from EPA HQ

At current funding rate ($15m/yr) cleanup will take roughly 25 years to complete

The cleanup will proceed from north to south (beginning with the Aerovox area) so that the most highly contaminated areas are addressed first

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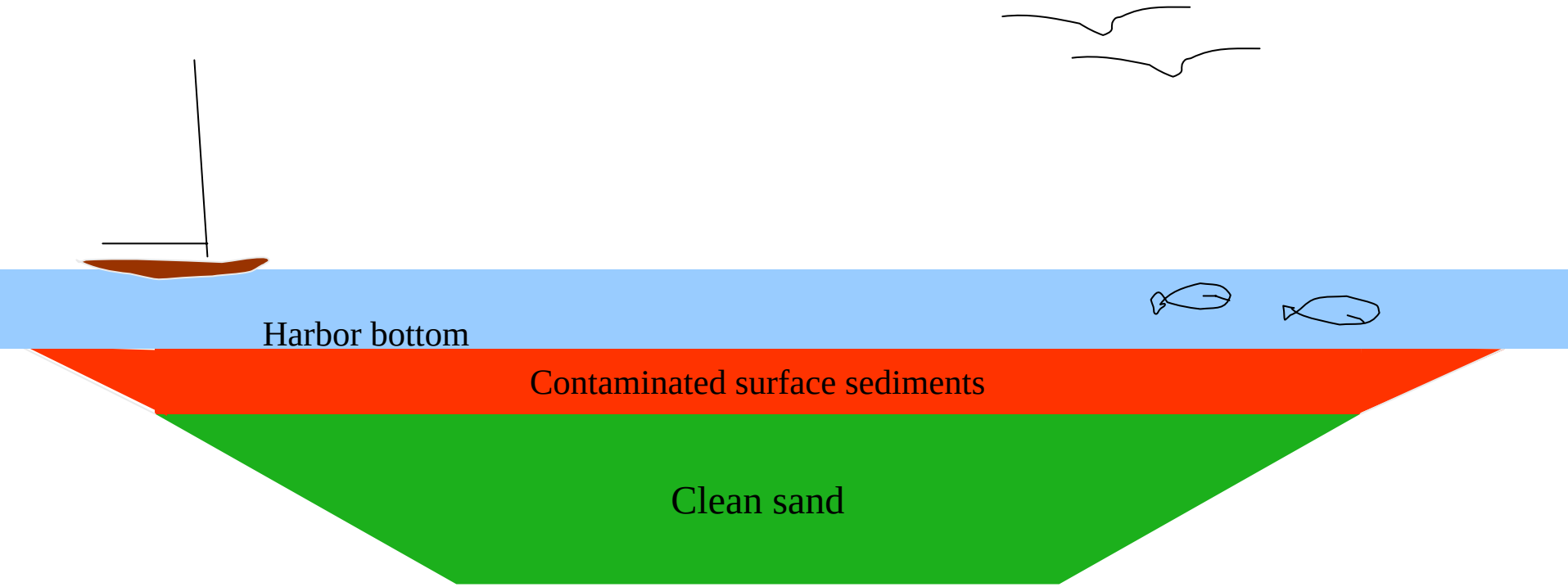
The city is constructing a Confined Aquatic Disposal (CAD) cell to hold sediment dredged from harbor channels.

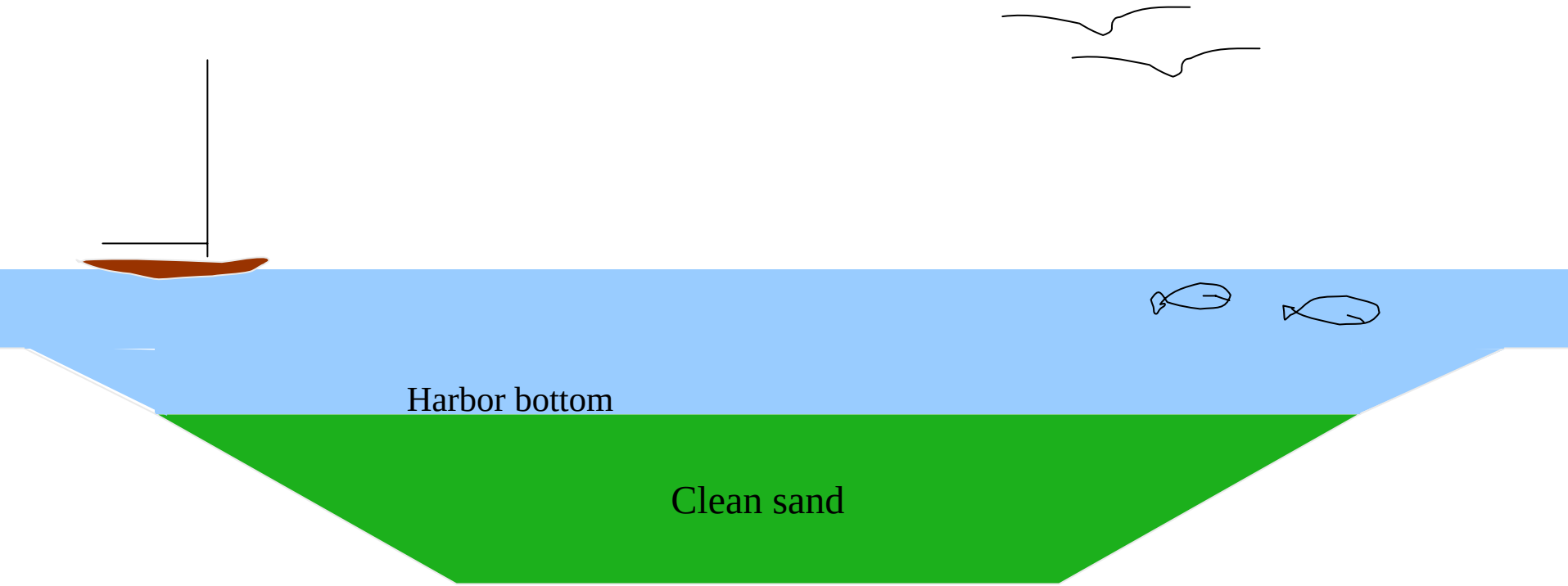
A CAD cell is a deep underwater pit that is dug and filled with dredged sediment, and then covered with a final layer of clean sand.

The digging will go deep enough to reach deep, clean sand that has never been contaminated by human activities.

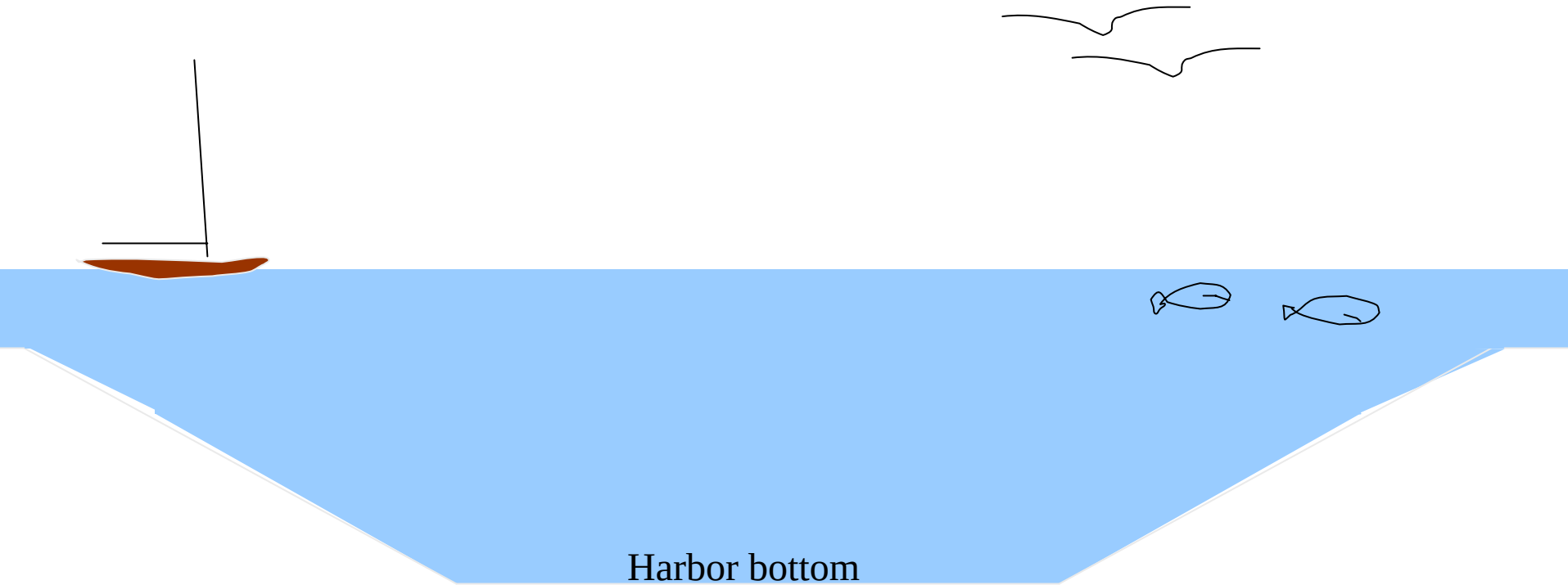
Next: a series of slides explaining what a CAD is and how it is constructed…



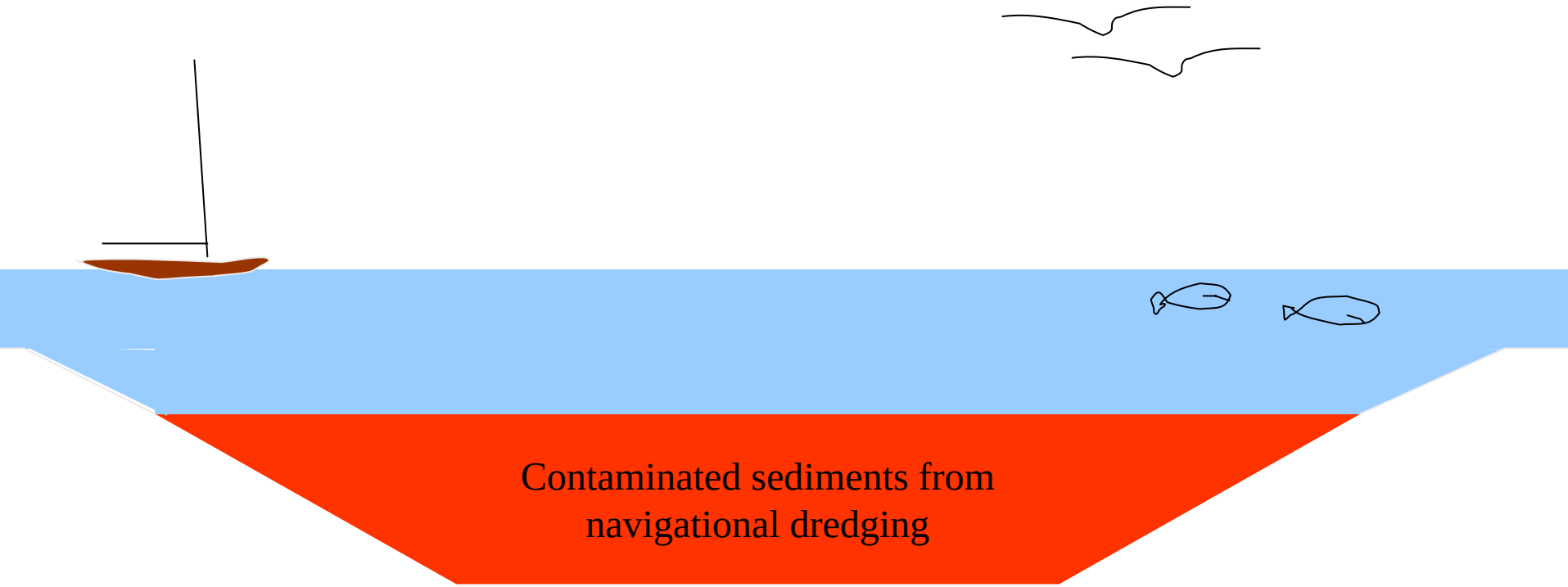
As is: New Bedford Harbor



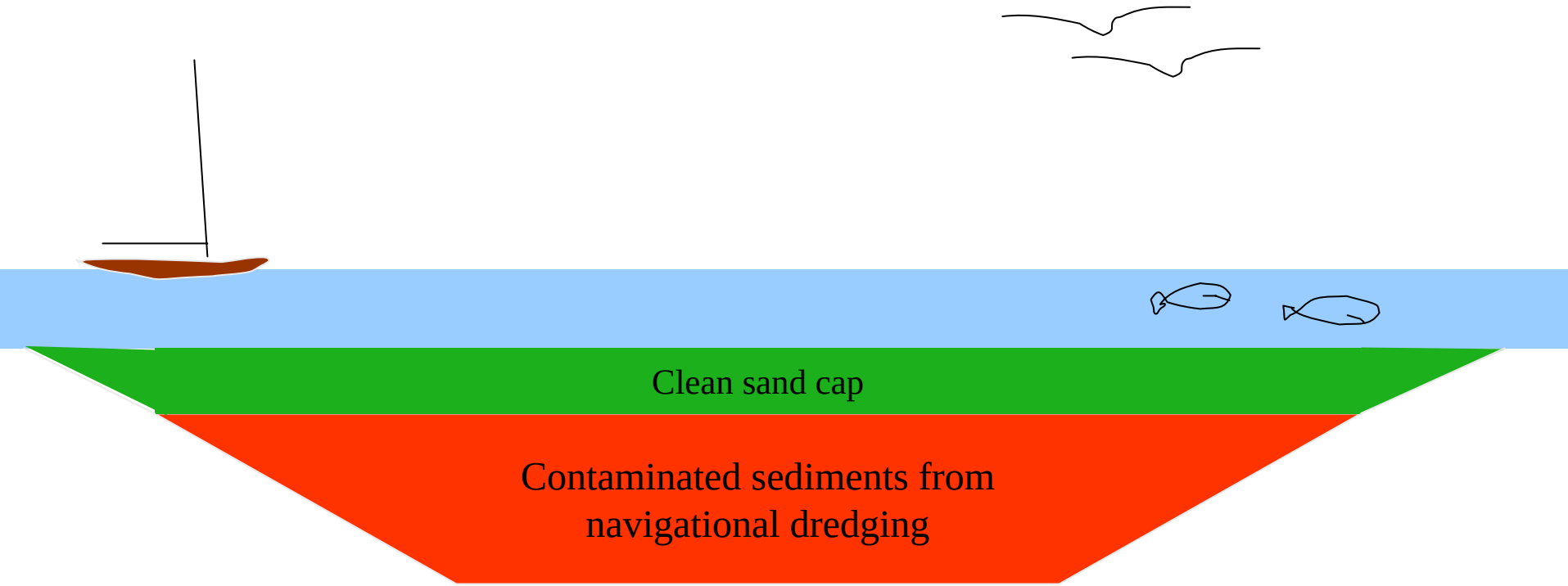
Step 1: the contaminated surface sediments are removed



Step 2: the underlying clean sand is removed.



Step 3: the CAD is filled with contaminated sediments from navigational dredging.



Step 4: clean sand is placed as a final cap.

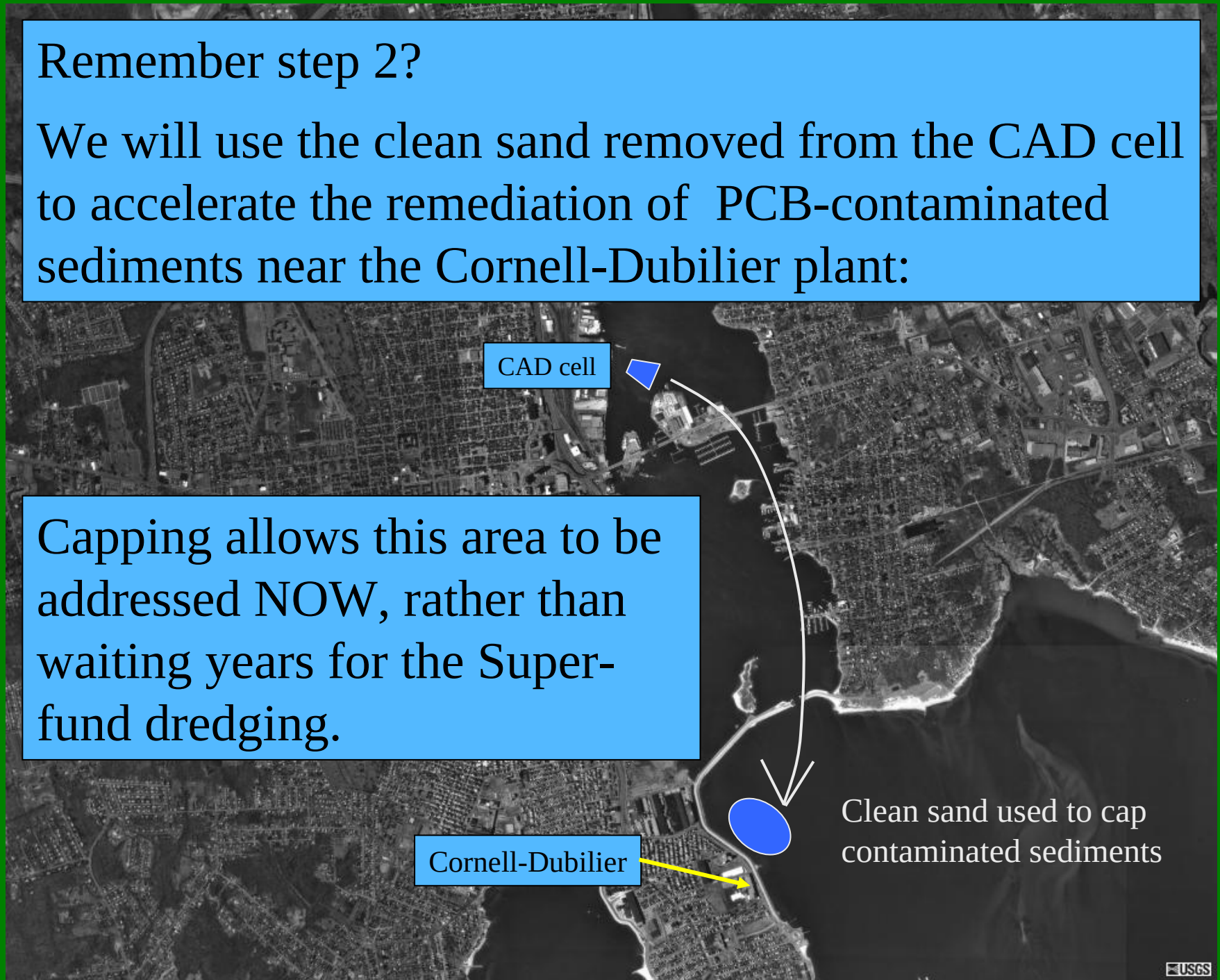
So…a flip flop:

BEFORE

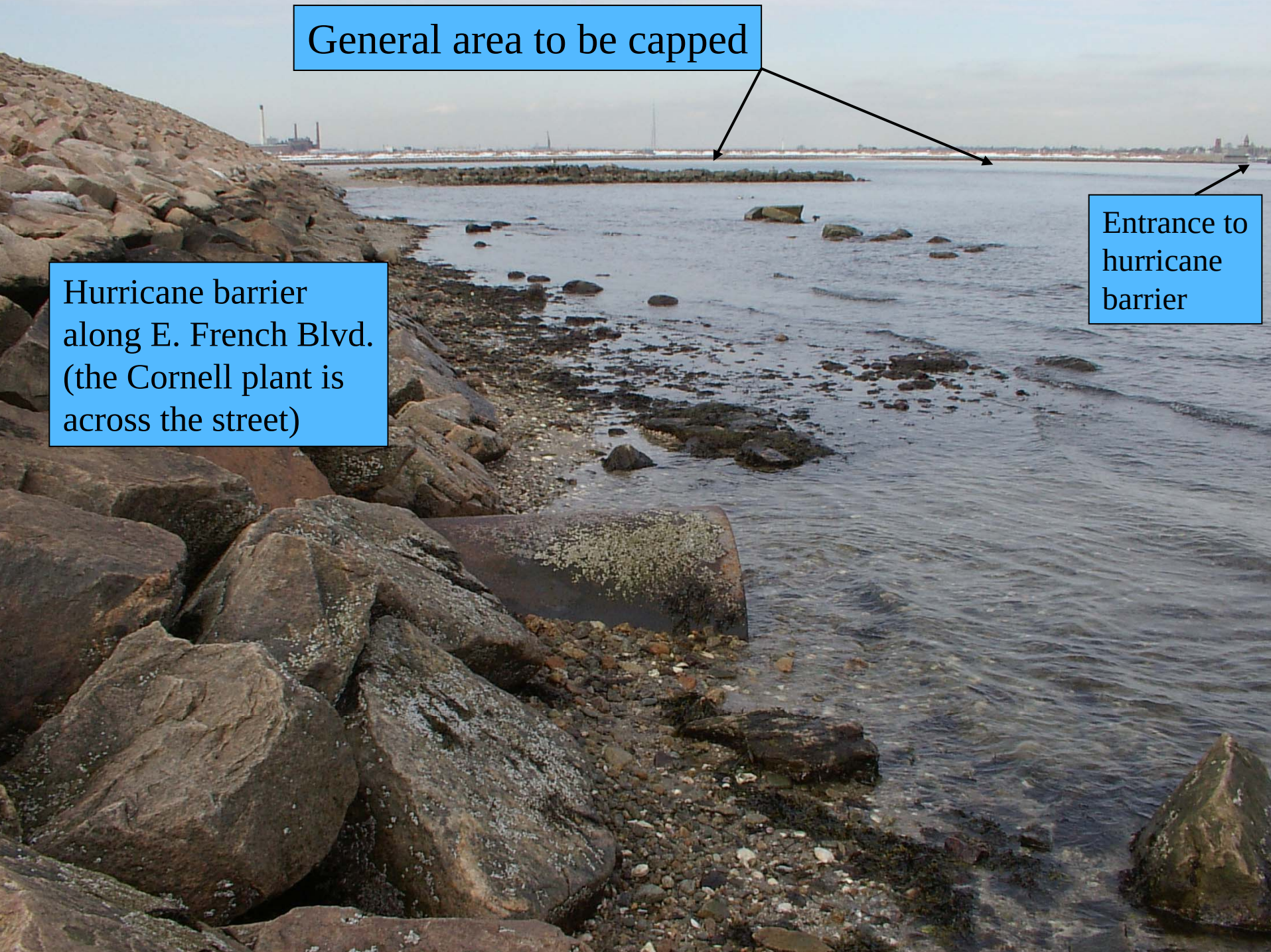
AFTER

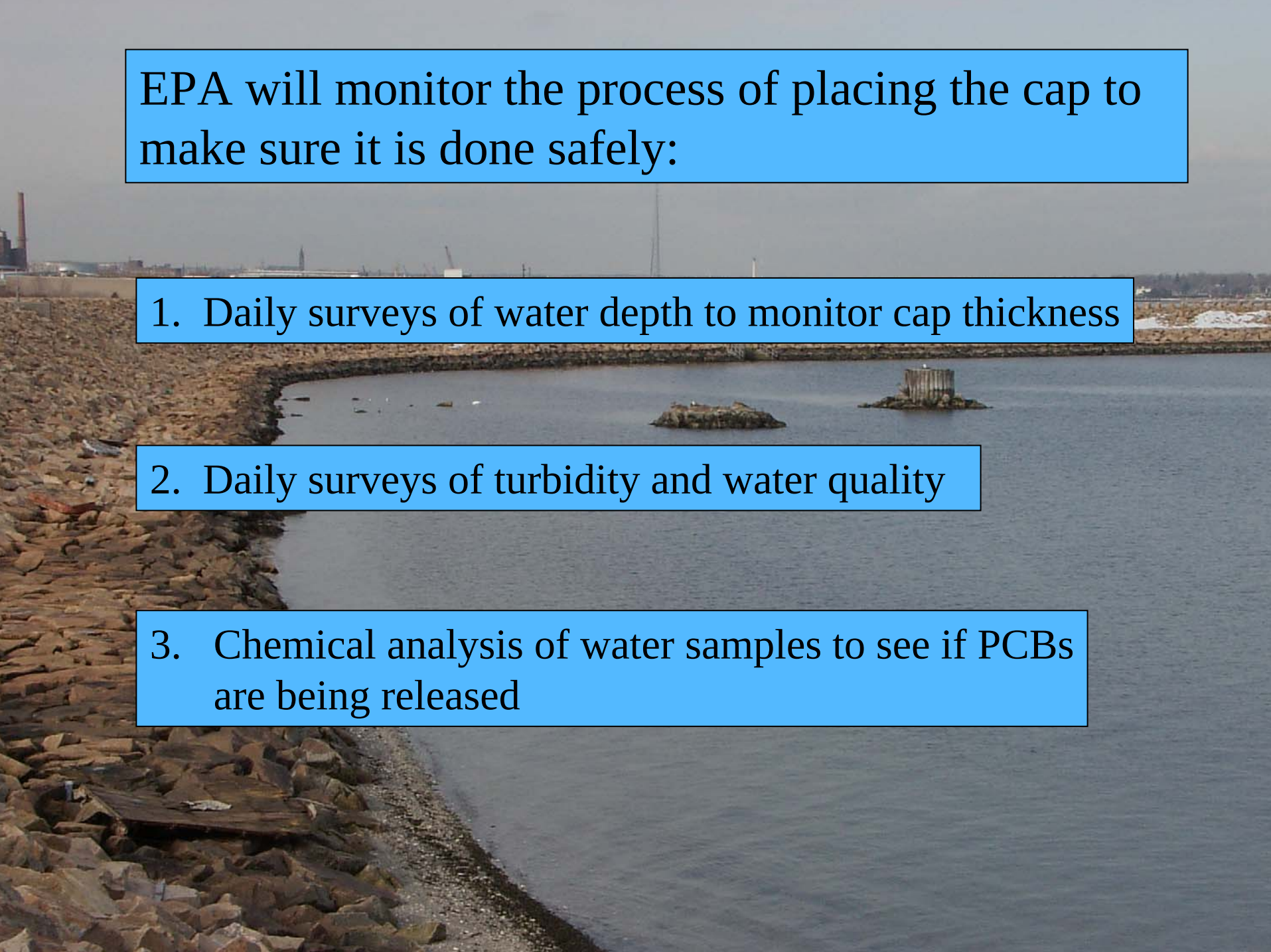
Remember step 2?

We will use the clean sand removed from the CAD cell to accelerate the remediation of PCB-contaminated sediments near the Cornell-Dubilier plant:



Capping allows this area to be addressed NOW, rather than waiting years for the Super-fund dredging.


General area to be capped
Entrance to hurricane barrier
Hurricane barrier along E. French Blvd. (the Cornell plant is across the street)



EPA will monitor the process of placing the cap to make sure it is done safely:

1. Daily surveys of water depth to monitor cap thickness

2. Daily surveys of turbidity and water quality

3. Chemical analysis of water samples to see if PCBs are being released

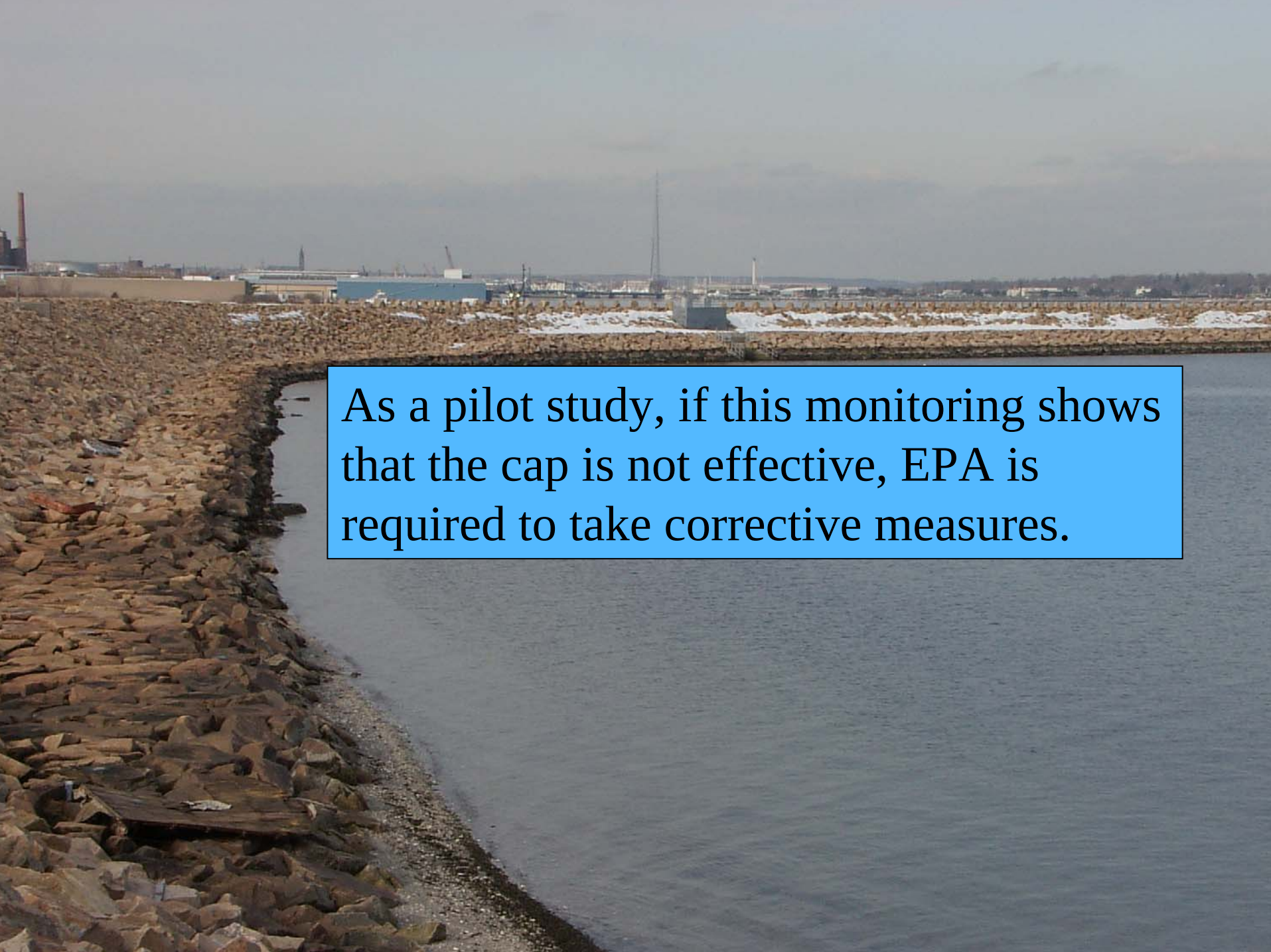
EPA will also monitor the cap annually after its in place:

1. Physical: has the thickness of the cap changed over time?

2. Chemical: is the surface of the cap free of PCBs?

3. Biological: has a healthy mix of marine plants and animals recolonized the capped area? (see next slide)

Sediment profiling camera


As a pilot study, if this monitoring shows that the cap is not effective, EPA is required to take corrective measures.

Questions?

Also see the project web site:
www.epa.gov/ne/nbh